

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of managing software components, said method comprising:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein ~~the~~ each of the components is managed by an associated container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and other administrative messages from the Central

Administrator to one of the components and provides a thread of execution to one of the components; and wherein the agent can read and respond to the messages; and

modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

Claim 2 (original): The method of Claim 1, wherein two or more of said plurality of computer platforms are geographically separated from each other.

Claim 3 (cancelled)

Claim 4 (cancelled)

3

Claim ~~5~~ (original): The method of Claim 1, wherein said monitoring comprises receiving health status messages each containing only changes in health status since receipt of a last health status message.

4

Claim ~~6~~ (currently amended): A computer system for managing software components, comprising computer instructions for:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein each of the components is managed by an associated container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and other administrative messages from the Central

Administrator to one of the component and provides a thread of execution to one of the component; and wherein the agent can read and respond to the messages; and

modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

Claim ⁵ 1 (original): The method of Claim ⁴ 8, wherein two or more of said plurality of computer platforms are geographically separated from each other.

Claim 8 (cancelled)

Claim 9 (cancelled)

Claim ⁶~~10~~ (original): The method of Claim ⁴~~8~~, wherein said monitoring comprises receiving health status messages each containing only changes in said health status since receipt of a last health status message.

Claim ⁷~~11~~ (currently amended): A computer readable storage medium, comprising computer instructions for:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein each of the components is managed by a container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and other administrative messages from the Central Administrator to one of the components and provides a

thread of execution to one of the components; and wherein the agent can read and respond to the messages; and

modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

⁸
Claim ~~12~~ (original): The method of Claim ⁷~~11~~, wherein two or more of said plurality of computer platforms are geographically separated from each other.

Claim 13 (cancelled)

Claim 14 (cancelled)

Claim ⁹~~15~~ (original): The method of Claim ⁷~~11~~, wherein said monitoring comprises receiving health status messages each containing only changes in said health status since receipt of a last health status message.

Claim ¹⁰~~16~~ (currently amended): A computer data signal embodied in a carrier wave, comprising computer instructions for:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said with components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein each of the components is managed by a container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and

other administrative messages from the Central Administrator to one of the components and provides a thread of execution to one of the components; and wherein the agent can read and respond to the messages; and

modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

¹¹ Claim ~~17~~ (original): The method of Claim ¹⁰ ~~16~~, wherein two or more of said plurality of computer platforms are geographically separated from each other.

Claim 18 (cancelled)

Claim 19 (cancelled)

¹²
Claim ~~20~~ (original): The method of Claim ~~16~~¹⁰, wherein said monitoring comprises receiving health status messages each containing only changes in said health status since receipt of a last health status message.

¹³
Claim ~~21~~ (previously presented): The method of claim 1, wherein the software components belong to the business application, and wherein a health status message includes content that is determined by at least one parameter that is critical to the business application.

¹⁴
Claim ~~22~~ (previously presented): The method of claim 1, wherein the software components are developed from a set of base classes that utilize object oriented programming (OOP) methods, in order to deploy a common set of OOP methods across all software components.

¹⁵
Claim ~~23~~ (previously presented): The method of claim 1, wherein an instance of a software component is configured to run as a single thread or as multiple threads within an agent.

Claim 24 (cancelled)

¹⁶
Claim ~~25~~ (previously presented): The method of claim 1, wherein a Distributed Administrator is configured to spawn an agent, in response to an instruction from the Central Administrator.

¹⁷
Claim ~~26~~ (previously presented): The method of claim ¹⁶~~25~~, wherein the Distributed Administrator passes a configuration file to the agent, where the configuration file includes configuration information for the agent.

¹⁸
Claim ~~27~~ (previously presented): The method of claim 1, wherein the Central Administrator and Distributed Administrators perform crash recovery for a computer platform.

¹⁹
Claim ~~28~~ (previously presented): The method of claim 1, wherein a software component is a simplest addressable logical element within the business application.

²⁰
Claim ~~29~~ (currently amended): A method of managing software components, said method comprising:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein each of the components is managed by a container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and

other administrative messages from the Central Administrator to one of the components and provides a thread of execution to one of the components; and wherein the agent can read and respond to the messages; and

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator; and

modifying or replacing one or more said components using said Administrator in response to said determining;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

³¹ Claim ~~30~~ (previously presented): The method of Claim ²⁰~~29~~, wherein two or more of said plurality of computer platforms are geographically separated from each other.

²²
Claim ~~31~~ (previously presented): The method of Claim ²⁰~~29~~,
wherein said monitoring comprises receiving health status
messages each containing only changes in said health status
since receipt of a last health status message.

²³
Claim ~~32~~ (previously presented): The method of claim ²⁰~~29~~,
wherein a health status message includes content that is
determined by at least one parameter that is critical to
the business application.

²⁴
Claim ~~33~~ (previously presented): The method of claim ²⁰~~29~~,
wherein the software components are developed from a set of
base classes that utilize object oriented programming (OOP)
methods, in order to deploy a common set of OOP methods
across all software components.

²⁵
Claim ~~34~~ (previously presented): The method of claim ²⁰~~29~~,
wherein an instance of a software component is configured
to run as a single thread or as multiple threads within an
agent.

²⁶
Claim ~~35~~ (previously presented): The method of claim ²⁰~~29~~,
wherein a Distributed Administrator is a process manager
for a process of an agent.

²⁷
Claim ~~36~~ (previously presented): The method of claim ²⁰~~29~~,
wherein a Distributed Administrator is configured to spawn
an agent, in response to an instruction from the Central
Administrator.

²⁸
Claim ~~37~~ (previously presented): The method of claim ²⁷~~36~~,
wherein the Distributed Administrator passes a
configuration file to the agent, where the configuration
file includes configuration information for the agent.

²⁹
Claim ~~38~~ (previously presented): The method of claim ²⁰~~39~~,
wherein the Central Administrator and Distributed
Administrators perform crash recovery for a computer
platform.

³⁰
Claim ~~39~~ (previously presented): The method of claim ²⁰~~39~~,
wherein a software component is a simplest addressable
logical element within the business application.

³¹
Claim ~~40~~ (previously presented): The method of claim 1,
wherein the agent sends heartbeat signals to the Central
Administrator to indicate that the agent is available and
sends health status messages to the Distributed
Administrators, wherein the health status messages are
associated with the containers and components of the agent.

*Note: Redundancy
is cancelled
here, not claim
40.*

~~Claim 40 (cancelled): The method of claim 1, wherein the
agent sends heartbeat signals to the Central Administrator
to indicate that the agent is available and sends health
status messages to the Distributed Administrators, wherein
the health status messages are associated with the
containers and components associated with the agent.~~

³²
Claim ~~41~~ (previously presented): The method of claim ⁴~~8~~,
wherein the agent sends heartbeat signals to the Central

Administrator to indicate that the agent is available and sends health status messages to the Distributed Administrators, wherein the health status messages are associated with the containers and components associated with the agent.

³³
Claim ~~42~~ (new): The method of claim 1, wherein the agent sends the health status message to the Distributed Administrator at a regular interval.

³⁴
Claim ~~43~~ (new): The method of claim 1, wherein the process schedule check is performed by checking, by the Distributed Administrator, a process schedule table that indicates a status of the agent.